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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/584,047	05/30/2000	Yu-Suk Yun	678-488 (P9205)	9893

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EXAMINER	
GARY, ERIKA A	

ART UNIT	PAPER NUMBER
2681	

DATE MAILED: 11/04/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/584,047	YUN ET AL.	
	Examiner	Art Unit	
	Erika A. Gary	2681	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *11 August 2004*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-14* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-14* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Objections

1. Claim 14 is objected to because of the following informalities: claim 14 depends from claim 12, but it appears that it should depend from claim 13. Appropriate correction is required.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. Claims 3-5, 7, 9, 11, and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nanda et al., US Patent Number 5,842,113 (hereinafter Nanda) in view of Moon et al., US Patent Number 6,643,272 (hereinafter Moon).

Regarding claim 3, Nanda discloses a mobile communication system comprising: a transmission power controlling circuit for receiving a data signal to transmit and power control information, for controlling a gain of the data signal based on the power control information, thereby controlling the transmission power of the data signal; and an offset controlling unit connected to the transmission power controlling circuit, for receiving a gating information signal, and for outputting an offset signal indicating a gain value for compensating the transmission power according to the gating rate; wherein the

transmission power controlling circuit controls the transmission power of the data signal by adding the offset to or subtracting the offset from the gain value (fig. 3., col. 1: lines 49-67).

What Nanda does not specifically disclose is that the power is controlled whether or not there is data to be transmitted. However, Moon teaches this limitation. Moon discloses power level arbitration in a mobile communication system wherein power is controlled even when there is no data to transmit [col. 2: lines 7-9].

Nanda and Moon are combinable because they are from the same field of endeavor, that is, power control for controlling transmission power in a mobile communication system. At the time of the invention, it would have been obvious to one of ordinary skill in the art to modify Nanda to include Moon. The motivation for this combination would have been to continuously control the power in the mobile communication system.

Regarding claim 4, Nanda discloses an offset table storage for storing offsets with respect to variations in gating rates according to state transition and variations in gating rates in a same state; and an offset controller for receiving state transition and gating rate information from a higher layer, for reading an offset corresponding to the received information, and for outputting the offset to the outer-loop power controller (fig. 6; col. 2: lines 24-26; col. 5: lines 38-67).

Regarding claim 5, Nanda discloses a receiving device in a CDMA mobile communication system, which receives information about a pre-transition gating rate and a post-transition gating rate from a base station upon state transition, comprising:

an offset table storage for storing offsets according to state transitions; an offset controller for receiving state transition information through a higher layer message, and for reading an offset corresponding to the state transition information from the offset table storage; and an outer-loop power controller for storing a previous threshold, for performing an outer-loop power control operation by adding the previous threshold to the offset received from the offset controller, and for outputting a threshold (col. 1 : lines 49-67; fig. 6; col. 2: lines 24-26; col. 5: lines 38-67).

What Nanda does not specifically disclose is that the power is controlled whether or not there is data to be transmitted. However, Moon teaches this limitation. Moon discloses power level arbitration in a mobile communication system wherein power is controlled even when there is no data to transmit [col. 2: lines 7-9].

Nanda and Moon are combinable because they are from the same field of endeavor, that is, power control for controlling transmission power in a mobile communication system. At the time of the invention, it would have been obvious to one of ordinary skill in the art to modify Nanda to include Moon. The motivation for this combination would have been to continuously control the power in the mobile communication system.

Regarding claim 7, Nanda discloses a receiving device in a CDMA mobile communication system, which receives information from a base station upon a state transition, said information including pre-transition and post-transition gating rate information and an offset table, said offset table listing offsets versus state transitions, comprising: an offset table storage for storing an offset table; an offset controller for

receiving the offset table through a higher layer message, for storing the offset table in the offset table storage, for receiving state transition information, and for reading an offset corresponding to the state transition information from the offset table storage; and an outer-loop power controller for storing a previous threshold, for performing an outer-loop power control operation by adding the previous threshold to the offset received from the offset controller, and for outputting a threshold (col. 1 : lines 49-67; fig. 6; col. 2: lines 24-26; col. 5: lines 38-67).

What Nanda does not specifically disclose is that the power is controlled whether or not there is data to be transmitted. However, Moon teaches this limitation. Moon discloses power level arbitration in a mobile communication system wherein power is controlled even when there is no data to transmit [col. 2: lines 7-9].

Nanda and Moon are combinable because they are from the same field of endeavor, that is, power control for controlling transmission power in a mobile communication system. At the time of the invention, it would have been obvious to one of ordinary skill in the art to modify Nanda to include Moon. The motivation for this combination would have been to continuously control the power in the mobile communication system.

Regarding claim 9, Nanda discloses a receiving device in a CDMA mobile communication system, which receives an offset with respect to a pre-transition gating rate and a post-transition gating rate from a base station upon state transition, comprising: an offset controller for detecting and receiving an offset through a higher layer message and for outputting the offset; and an outer-loop power controller for

storing a previous threshold, for performing an outer-loop power control operation by adding the previous threshold to the offset received from the offset controller, and for outputting a threshold (col. 1 : lines 49-67; fig. 6; col. 2: lines 24-26; col. 5: lines 38-67).

What Nanda does not specifically disclose is that the power is controlled whether or not there is data to be transmitted. However, Moon teaches this limitation. Moon discloses power level arbitration in a mobile communication system wherein power is controlled even when there is no data to transmit [col. 2: lines 7-9].

Nanda and Moon are combinable because they are from the same field of endeavor, that is, power control for controlling transmission power in a mobile communication system. At the time of the invention, it would have been obvious to one of ordinary skill in the art to modify Nanda to include Moon. The motivation for this combination would have been to continuously control the power in the mobile communication system.

Regarding claim 11, Nanda discloses a power controlling method in a CDMA mobile communication system in which information is received from a base station upon a state transition, said information including pre-transition and post-transition gating rate information and an offset table, said offset table having offsets versus state transitions, comprising the steps of: receiving the offset table through a higher layer message; storing, by an offset controller, the offset table in an offset table storage; receiving state transition information through the higher layer message; reading, by the offset controller, an offset corresponding to the state transition from the offset table; performing an outer-loop power control operation by adding a previous threshold to the

offset received from the offset controller; and outputting, by an outer-loop power controller, a threshold (col. 1: lines 49-67; fig. 6; col. 2: lines 24-26; col. 5: lines 38-67).

What Nanda does not specifically disclose is that the power is controlled whether or not there is data to be transmitted. However, Moon teaches this limitation. Moon discloses power level arbitration in a mobile communication system wherein power is controlled even when there is no data to transmit [col. 2: lines 7-9].

Nanda and Moon are combinable because they are from the same field of endeavor, that is, power control for controlling transmission power in a mobile communication system. At the time of the invention, it would have been obvious to one of ordinary skill in the art to modify Nanda to include Moon. The motivation for this combination would have been to continuously control the power in the mobile communication system.

Regarding claim 13, Nanda discloses a power controlling method in a CDMA mobile communication system in which an offset with respect to a pre-transition gating rate and a post-transition gating rate is received from a base station upon state transition, comprising the steps of: detecting, by an offset controller, an offset in a higher layer message; outputting, by and offset controller, the offset; performing an outer-loop power control operation by adding a previous threshold to the offset received from the offset controller; and outputting, by an outer-loop power controller, a threshold (col. 1: lines 49-67; fig. 6; col. 2: lines 24-26; col. 5: lines 38-67).

What Nanda does not specifically disclose is that the power is controlled whether or not there is data to be transmitted. However, Moon teaches this limitation. Moon

discloses power level arbitration in a mobile communication system wherein power is controlled even when there is no data to transmit [col. 2: lines 7-9].

Nanda and Moon are combinable because they are from the same field of endeavor, that is, power control for controlling transmission power in a mobile communication system. At the time of the invention, it would have been obvious to one of ordinary skill in the art to modify Nanda to include Moon. The motivation for this combination would have been to continuously control the power in the mobile communication system.

4. Claims 1 and 2 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nanda and Moon in view of Chen et al., US Patent Number 6,373,823 (hereinafter Chen).

Regarding claim 1, Nanda discloses a power controlling device in a mobile communication system, comprising: a frame error detector for detecting an error from a frame of a predetermined length and for generating an error signal indicating whether an error has been generated; an outer-loop power controller for increasing the threshold to generate power control information commanding power increase in response to an error signal indicating the existence of a frame error and for decreasing the threshold to generate power control information commanding power decrease in response to an error signal indicating the absence of a frame error; and an offset controlling unit connected to the outer-loop power controller, for receiving gating information about gated transmission of data in a frame at a predetermined rate and for generating an

offset signal indicating an offset corresponding to a changed gating rate if the gating rate is changed (col. 1: lines 49-67; fig. 6; col. 2: lines 24-26; col. 3: line 56 - col. 4: line 2; col. 5: lines 38-67).

What Nanda does not specifically disclose is that the power is controlled whether or not there is data to be transmitted. However, Moon teaches this limitation. Moon discloses power level arbitration in a mobile communication system wherein power is controlled even when there is no data to transmit [col. 2: lines 7-9].

Further, Nanda and Moon do not specifically disclose a closed-loop power controller for comparing a threshold with a signal-to-noise ratio for generating power control information according to the comparison result. However, Chen teaches this limitation (col. 3: lines 57-60). Chen does not specifically state that the signal-to-noise ratio is based on the signal-to-noise ratio of each power control group, but this is understood, as Chen discloses generating power control commands by comparing the SNR of forward link signals (col. 3: lines 27-30).

Nanda, Moon and Chen are combinable because they are from the same field of endeavor, that is, power control for controlling transmission power in a mobile communication system. At the time of the invention, it would have been obvious to one of ordinary skill in the art to modify Nanda and Moon to include Chen. The motivation for this combination would have been to incorporate closed-loop power control with outer-loop power control for more effectively adjusting the power by also taking the signal-to-noise ratio into account.

Regarding claim 2, Nanda discloses an offset table storage for storing offsets with respect to variations in gating rates according to state transition and variations in gating rates in a same state; and an offset controller for receiving state transition and gating rate information from a higher layer, for reading an offset corresponding to the received information, and for outputting the offset to the outer-loop power controller (fig. 6; col. 2: lines 24-26; col. 5: lines 38-67).

5. Claims 6, 8, 10, 12, and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nanda and Moon in view of Chen.

Regarding claim 6, 8, 10, 12, and 14, Chen discloses a closed-loop power controller for receiving the threshold and for performing a closed-loop power control operation (col. 3: lines 57-60).

Nanda, Moon and Chen are combinable because they are from the same field of endeavor, that is, power control for controlling transmission power in a mobile communication system. At the time of the invention, it would have been obvious to one of ordinary skill in the art to modify Nanda to include Chen. The motivation for this combination would have been to incorporate closed-loop power control with outer-loop power control for more effectively adjusting the power by also taking the signal-to-noise ratio into account.

Response to Arguments

6. Applicant's arguments with respect to claims 1-14 have been considered but are moot in view of the new ground(s) of rejection.

In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., adjusting the transmission power based on both the frame error rate of the signal-to-noise ratio and data transmission) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

Conclusion

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Erika A. Gary whose telephone number is 703-308-0123. The examiner can normally be reached on Monday-Thursday and alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Hudspeth can be reached on 703-308-4825. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

EAG
November 2, 2004

ERIKA A. GARY
PRIMARY EXAMINER